AMENDMENTS TO THE CLAIMS

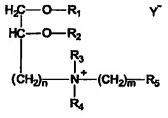
This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1-67. (Canceled).

68. (Currently Amended) A method of delivering an anionic molecule into a cell, comprising:

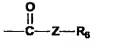
(a) forming a lipid complex by contacting the anionic molecule with a composition comprising an effective amount of a compound according to the formula:



wherein R_1 and R_2 are identical and are selected from the group consisting of $C_{14}H_{29}$ and $C_{12}H_{25}$;

R_3 and R_4 are independently H; linear or branched, unsubstituted or substituted $C_{1\text{-}23}$ alkyl, acyl, alkenyl, or C_1-C_5 heteroalkyl group having one heteroatom ~~from 0 to 6 sites of unsaturation~~; or a cyclic or aryl group[[,]] ~~said heteroalkyl, cyclic, and aryl groups~~ comprising from 0 to 5 heteroatoms wherein said heteroatoms are not the first atoms in said heteroalkyl, cyclic and aryl groups, wherein the substituent groups are selected from the group consisting of -O-$(CH_2)_k$-CH_3, -S-$(CH_2)_k$-CH_3, and X-$(CH_2)_k$-, wherein X is a halide, and k is 0 to 4;

R_5 has the structure



wherein Z is selected from the group consisting of O, S, NR_1, NH, and Se;

R_6 is selected from the group consisting of H, R_3, and R_4, and, when Z is O, NH, NR_1, or S, R_6 can further be an amino acid, peptide, polypeptide, protein, mono-, di- or polysaccharide, wherein Z is an atom of said amino acid, peptide, polypeptide, protein, mono-, di- or polysaccharide;

n is 1 to 6;

m is 1 to 10;

Y is a pharmaceutically acceptable anion; and

wherein if Z is O, n is 1, and m is 3, then R_6 is selected from the group defined for R_3 and R_4; and

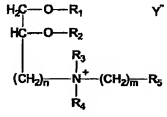
(b) contacting a cell with the lipid complex formed in step (a);

whereby a biologically effective amount of the anionic molecule is delivered into the cell.

69-70. (Canceled).

71. (Currently Amended) A method of delivering an anionic molecule into a cell, comprising:

(a) forming a lipid complex by contacting the anionic molecule with a composition comprising an effective amount of a compound according to the formula:



wherein

R_1 and R_2 are identical and are selected from the group consisting of $C_{14}H_{29}$ and $C_{12}H_{25}$;

R_3 and R_4 are independently H; linear or branched, unsubstituted or substituted C_{1-23} alkyl, acyl, alkenyl, or C_1-C_5 heteroalkyl group having one heteroatom ~~from 0 to 6 sites of unsaturation~~; or a cyclic or aryl group[[,]] ~~said heteroalkyl, cyclic, and aryl groups~~ comprising

from 0 to 5 heteroatoms wherein said heteroatoms are not the first atoms in said heteroalkyl, cyclic and aryl groups, wherein the substituent groups are selected from the group consisting of -O-$(CH_2)_k$-CH_3, -S-$(CH_2)_k$-CH_3, and X-$(CH_2)_k$-, wherein X is a halide, and k is 0 to 4;

R_5 has the structure:

R_7 and R_8 are independently selected from the group defined for R_3 and R_4 and one of R_7 and R_8 can further be an amino acid, peptide, polypeptide, protein, or mono-, di- or polysaccharide, wherein an amino nitrogen of said amino acid, peptide, polypeptide, protein, or mono-, di- or polysaccharide is the N to which R_7 or R_8 is attached;

n is 1 to 6;

m is 1 to 10; and

Y is a pharmaceutically acceptable anion; and

(b) contacting a cell with the lipid complex formed in step (a);

whereby a biologically effective amount of the anionic molecule is delivered into the cell.

72. (Canceled).

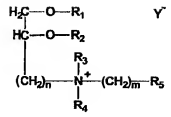
73. (Previously Presented) The method according to claim 71, wherein R_3 and R_4 are selected from the group consisting of C_1-C_5 alkyl groups and C_1-C_5 heteroalkyl groups having one heteroatom therein.

74. (Previously Presented) A method according to claim 73, wherein R_3 and R_4 are methyl groups.

75-84. (Canceled).

85. (Currently Amended) A method of delivering an anionic molecule into a cell, comprising:

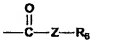
(a) forming a lipid complex by contacting the anionic molecule with a composition comprising an effective amount of a compound according to the formula:



wherein R_1 and R_2 are independently H; linear or branched, unsubstituted or substituted C_{1-23} alkyl, acyl, alkenyl, or heteroalkyl group having from 0 to 6 sites of unsaturation; or a cyclic or aryl group, said heteroalkyl, cyclic, and aryl groups comprising from 0 to 5 heteroatoms wherein said heteroatoms are not the first atoms in said groups, wherein the substituent groups are selected from the group consisting of -O-$(CH_2)_k$-CH_3, -S-$(CH_2)_k$-CH_3, and X-$(CH_2)_k$-, wherein X is a halide, and k is 0 to 4;

R_3 and R_4 are independently H; linear or branched, unsubstituted or substituted C_{1-23} alkyl, acyl, alkenyl, or C_1-C_5 heteroalkyl group having one heteroatom ~~from 0 to 6 sites of unsaturation~~; or a cyclic or aryl group[[,]] ~~said heteroalkyl, cyclic, and aryl groups~~ comprising from 0 to 5 heteroatoms wherein said heteroatoms are not the first atoms in said heteroalkyl, cyclic and aryl groups, wherein the substituent groups are selected from the group consisting of -O-$(CH_2)_k$-CH_3, -S-$(CH_2)_k$-CH_3, and X-$(CH_2)_k$-, wherein X is a halide, and k is 0 to 4;

R_5 has the structure



wherein Z is selected from the group consisting of NR_1, and NH;

R_6 is selected from the group consisting of H, R_1, R_2, R_3, and R_4, and, R_6 can further be an amino acid, peptide, polypeptide, protein, or mono-, di- or polysaccharide, wherein Z is an atom of said amino acid, peptide, polypeptide, protein, or mono-, di- or polysaccharide;

n is 1 to 6;

m is 1 to 10;

Y is a pharmaceutically acceptable anion; and

(b) contacting a cell with the lipid complex formed in step (a);

whereby a biologically effective amount of the anionic molecule is delivered into the cell.

86. (Previously Presented) A method of delivering an anionic molecule into a cell, comprising:

(a) forming a lipid complex by contacting the anionic molecule with a composition comprising an effective amount of a compound, wherein said compound is selected from the group consisting of dioleyl Rosenthal Inhibitor Ether (DORIE) carboxylate, dimyristyl Rosenthal Inhibitor Ether (DMRIE) carboxylate, DMRIE carboxylate propyl amide, DMRIE carboxylate methionine-methylester amide, DMRIE carboxylate methionine-leucine-methylester amide, and DMRIE carboxylate methionine-leucine-phenylalanine-methylester amide; and

(b) contacting a cell with the lipid complex formed in step (a);

whereby a biologically effective amount of the anionic molecule is delivered into the cell.

87. (Currently Amended) The method according to claim 71, wherein R_7 and R_8 are independently selected from the group defined for R_3[[,]] and R_4.

88-90. (Canceled).